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Productivity Measurements for Accounting Functions

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Answering the big questions

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Productivity Measurements for Accounting Functions

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Productivity in Accounting Functions

Sir William Thompson (Lord Kelvin, 1824-1907) proclaimed over a century ago, "If you cannot measure it, you cannot improve it!" He was talking about measurements in the world of thermodynamics, but it would have been entirely appropriate for a keynote address in a business conference today. Peter Drucker said something similar many years later, "What gets measured, get done!"

The measurement of efficiency and effectiveness are indeed close to accountants and their traditional training. They are used to evaluating profitability of business units, analysing cost variances and tracking key performance indicators (KPIs). They are the "scorekeepers" of every unit, function and process in a business. Little has been asked about their own efficiency, let alone their productivity.

This has now changed. CFOs, controllers and accountants have put "streamlining processes and improving productivity" as the most critical challenge facing their organisation (IMA, 2011). In the last year, respondents have undertaken business process improvement efforts (75 per cent of respondents), automation of business processes (67 per cent), data analysis and business intelligence (52 per cent) and improving staff training (41 per cent). Despite these efforts, respondents indicated that there are still many accounting functions that require improvements, as shown in Exhibit 3.1.

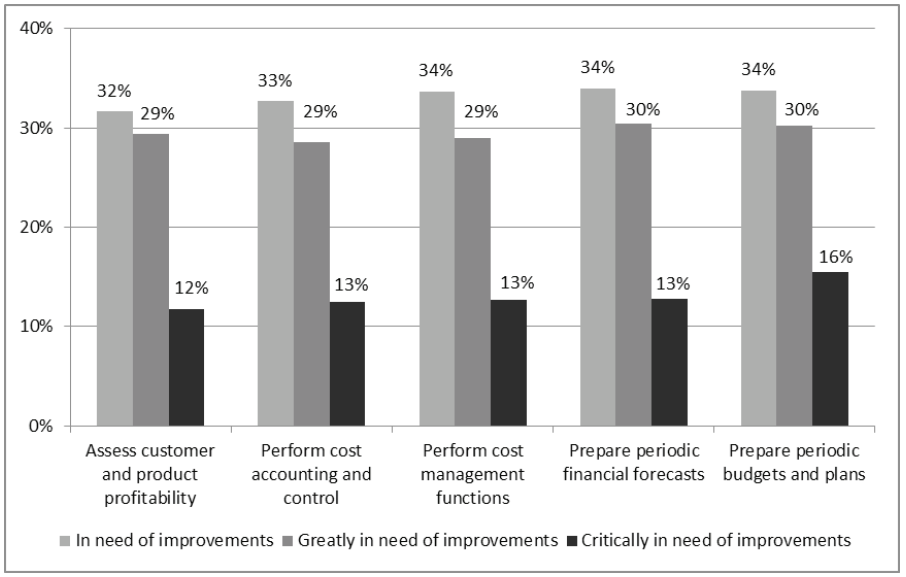

Exhibit 3.1 – Accounting Functions in Needs of Improvement

Clearly, the finance department is under pressure to enhance its own value contribution to the business, deliver high quality information and maintain effective controls. It is subject to the same continuing internal demands to reduce the cost of its own operations. To be more efficient, be more productive.

But many finance departments are in a quandary. They are unsure how to demonstrate whether they are delivering real value to the business and to what extent they meet best practice standards for world-class finance departments. If productivity is how well an organisation uses its resources to achieve its goals *("inputs ➜ output ➜ goals")*, what exactly are the inputs, outputs and goals of the accounting function? How do we measure and improve productivity in the accounting function?

The Big Picture

Benchmarking studies use an overall "cost to sales" indicator as a proxy for the effectiveness of a finance department. This is calculated as the percentage of total finance costs over total sales or revenue. Finance cost would include both internal staffing costs and any outsourcing costs. It is a very simplistic measure but a useful reference point that most companies can relate to. Recent benchmarking studies seem to indicate an overall trend that finance costs, as a percentage of revenue, have decreased to about 1 per cent.

- Stutt (2005): Across all industries, the cost of finance departments averages about 1.5 per cent of sales. Top performers with world-class best practices were able to reduce this to 0.4 to 0.8 per cent of sales, depending on the nature of the industry.
- Deloitte (2006): On average the companies spent about 1.2 per cent of their revenue on the finance department.
- CFO Executive Board (2008): Average finance budget as a percentage of revenue is 1.13 per cent, with a range from 0.71 per cent for large companies to 2.16 per cent for smaller companies.
- PwC (2011): Median cost of finance costs as a percentage of revenue is 0.93 per cent and the top quartile performers incur only 0.56 per cent.

As expected, all benchmarking studies report lower cost of finance department as a percentage of sales for larger companies than smaller ones. Larger companies enjoy economies of scale and have the ability to invest in automated systems and technologies. Robert Half's (2011) benchmark study of over 200 companies offers a detailed breakdown of finance department's cost by revenue. Note that in this study, only internal finance costs were used.

	Less than $25M	$25-99M	$100-$499M	$500-999M	Over $1B
25th percentile	1.38%	0.90%	0.60%	0.70%	0.49%
Median	4.50%	4.50%	1.00%	1.00%	0.73%
75th percentile	8.00%	3.00%	2.00%	1.80%	1.15%

Exhibit 3.2 – How Much Does a Finance Department Cost?

Specific Measurement Metrics

The academic and professional literature offers a long list of potential efficiency and effectiveness measures for various accounting functions. A quick summary is provided below, along with indicative benchmarks. The indicative benchmarks are provided for illustrative purposes only and based on this author's analysis of various benchmarking results. Where overall results are not available, the results for the largest demographics are shown.

Overall Finance Department Measures:

- Total finance full-time equivalent (FTE) over total TFE ..... 5.2% (listed) 2.9% (non-listed)
- Number of finance applications used in the finance department ..... 3 applications
- Number of general ledger accounts ..... 81% has less than 1,000 accounts
- Number of days to produce financial statements ("close days") ..... 10 days (quarter) 22 days (annual)
- Number of key internal controls..... 77% has less than 100 controls

Budgeting and Planning:

- Budgeting cycle days..... Median: 120 days
- Forecasting cycle days..... Median: 20 days

Accounts Payable:

- Accounts payable invoices per assigned FTE ..... Median: 7,398-9,552 invoices
- Percentage of electronic invoices..... Median: 30-40%
- Percentage of available early payment discounts taken ..... Median: 89.3%
- Percentage of disbursement that are first time error free..... Median: 99.6%
- Cycle time from receipt of invoice to payment scheduled..... Median: 5.0 days
- Total cost per supplier invoice ..... Median: US$9.59

Accounts Receivable:

- Accounts receivable remittances per assigned FTE ..... Median: 5,828 remittances
- Number of invoices processed per assigned FTE ..... Median: 12,801 invoices
- Cycle time to generate complete and correct invoices..... Median: 3 days
- Percentage of invoiced line items paid in full the first time ..... Median: 94.0%
- Cycle time to resolve an invoice error..... Median: 7 days
- Total cost per invoice to customer..... Median: US$7.65

Exhibit 3.3 – Selected Finance Department Benchmarks

Unfortunately, there are no equivalent benchmarks specifically for Singapore businesses. Professional accountancy firms and consultants do offer benchmarking services but there is a clear lack of industry-wide publicly-available data on accounting productivity in Singapore.

Selecting the Right Metrics

The big trap in productivity measurements is to go overboard with all the possible measures you can think of, resulting in a tortuous affliction appropriately nicknamed "death by KPI". The pitfalls of KPI selection apply to accounting functions just like any other department or function in the organisation. Too many KPIs (and worse, non-relevant KPIs that no one in the organisation relies on for any real decision making), too much manual effort to tabulate KPIs, badly defined KPIs that result in inconsistencies, KPIs that are not reflective of organisational aims and strategy, and many others.

So, how do you pick the right metrics for your accounting functions? The Institute of Finance and Management (IOFM, 2012) suggests that each potential metric be put through a set of big questions: why, what, how, when, whom, and so forth. Answers to these questions should be documented and reviewed by parties involved in, and/or affected by, each of the steps. As an illustration, let us use a simplified version of the IOFM framework for selecting a metric for the Accounts Payable (AP) function.

Step 1: Why is it measured?
The AP function generally works on an auto-pilot basis. It receives invoices, expense claims and other business documents and processes them for payments. Occasionally, it spends significant amount of time and effort when the input quality is poor. IOFM claims that invoices requiring exception processing consumes 10 times as much effort than those that can be processed without intervention. This is probably outside the direct control of the accounts payable department but it is the one that "pays" for it. It may have to seek clarification from suppliers, submitter, approver or other departments before it can proceed with AP processing.

Step 2: What is to be measured?
The next step is to identify and define what is being measured. It may not be a perfect definition but the idea is to get something started quickly and improve it as you go through the framework. You may decide that you will track "invoices needing intervention prior to processing" as the metric for AP input quality.

Step 3: When and how should it be measured?
Several factors should be considered in deciding when measurements should be taken. For some measures, accuracy may be more important than timeliness, others may be too voluminous to track individually and a sampling strategy may be used. Other important considerations include whether the measurement is manually collected or automated through some system processes or applications, and how frequent are the measures used and evaluated.

In this case, we could track each exception as they occur by logging information such as date/time of exception, vendor, submitter, amount and type of exceptions.

Step 4: How are the measurements reported?
Similarly, the same factors (costs, benefits, frequency, etc) should be considered in terms of reporting the metrics. Some businesses have used "dashboards" or visual representations of the various metrics they track, where as others prefer a more structured reporting format. The other reporting intangibles could include sharing the KPI metrics prominently on a wall in the office, "mini" celebrations for good results, and so forth.

Over time, our tracking of "invoices needing intervention prior to processing" may show that there are common reasons for the exceptions. You may notice, for example, that the following reasons keep appearing: vendor not on file, unit prices and/or quantity not matching purchase order, line items on invoice not on purchase order (or vice versa), approval is above signing limit, and so forth.

Step 5: What do you do with the measurements?
This brings us back to the first starting point on why we want to establish the metric in the first place. The metric must be able to help the finance department identify problems, perform cause and effect analysis, determine appropriate corrective actions and manage resources more effectively.

For example, if certain vendors, submitters or approvers are responsible for a significant proportion of the metric, perhaps re-training (or "re-education session") is necessary. Alternatively, new automated controls may be added prior to submissions of AP inputs.

Productivity Measurement Model for Accounting Functions

Once you have selected the metrics for your accounting functions, how do you keep track of different metrics with different units and different targets? The IRF (2004) offers a way to summarise your metrics into one single productivity index. IRF suggests that businesses identify a group of measures that can measure the achievement of the specific functions, along with their relative degree of importance, taking into account company's strategies and priorities. For each metric, indicate if the desired direction is an increase or decrease, and assign priority levels (out of 100 per cent) to each metric.

For example, let us say after going through the selection process described earlier, we have decided to use the following accounting metrics[1] :

- Routine report cycle ("number of person-days to prepare routine reports")
- Post-issue error rates ("number of errors identified subsequent to issuance of reports")
- AP input quality ("invoices needing intervention prior to processing")

[1]We limit the metrics selected to 6 for simplicity of explanation. It is likely that each accounting function may have a number of metrics.

- Special report cycle ("number of person-days to produce special reports")
- Special report quality ("average rating of report satisfaction by requester, scored out of 10")
- Net cash flow index ("receivable days less payable days")

Once the measures and their respective weights are determined, performance may be tracked and total weighted results can be used as an annual productivity indicator. Exhibit 3.4, with hypothetical data, provides an example of how this can be accomplished.

Base data and new data are results from prior and current period, respectively. Change is indicated as percentage change with an index of 100, taking into account the desired directions. For example, a 1 day improvement on routine report cycle (from 15 to 14 days) equals to 100 ± (1/15*100) or 106.67.

Productivity Metrics	Desired Direction	Base Data	New Data	Directional Change	Weight	Weighted Index
Routine report cycle	↓	15 days	14 days	106.67	25%	26.67
Post-issue error rates	↓	12 errors	10 errors	116.67	25%	29.17
AP input quality	↓	395	369	106.58	20%	21.32
Special report cycle	↓	20 days	22 days	90.00	10%	9.00
Special report index	↑	8.5	9.2	108.24	10%	10.82
Net cash flow index	↓	-47 days	-50 days	106.38	10%	10.64
Total weighted productivity index						107.61

Exhibit 3.4 – Calculating an Accounting Functions Productivity Index

When summed up, the weighted index shows that the accounting functions showed a productivity improvement of 7.61 per cent over the previous year. This productivity index can then be charted over the periods for review and overall productivity targets.

Conclusion

Accounting functions are not immune to productivity improvements efforts. However, for many, the journey to measuring productivity of accounting functions has barely started. At the broadest level, benchmark studies suggest that larger companies can operate with total finance costs of about 1 per cent of sales. There are also other benchmarks across various accounting functions that can be selected.

Selecting the right metrics will help an organisation focus on measurable KPIs that can be used as basis for productivity improvements. The selection process must be meaningful, documented and reviewed periodically. Ask the big questions (why, what, how, when, etc) for each candidate metric, and only choose those that pass muster, suitable, easy to understand, quantifiable and "actionable".

Once you have decided on your metrics, you can use a weighted index, with prior period's results as a base, to calculate your own accounting productivity index.

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Chapter 4
Productivity in Accounting Practices

Themin Suwardy, Singapore Management University

Productivity-Quality Paradox in Accounting Firms

There are about 600 public accountancy entities registered under the Accountants Act with the Accounting and Corporate Regulatory Authority (ACRA) in Singapore. These entities provide "public accountancy services", which are defined under the Act as "the audit and reporting on financial statements and the doing of such other acts that are required by any written law to be done by a public accountant".

The drive towards higher level of productivity in the accounting sector has a direct impact on these public accountancy services providers. Indirectly, clients will also benefit from the firms' increased productivity.

As service (and value) providers, accountancy firms face two opposing aspects of productivity improvement efforts. On one hand, having less staff (or simply making staff work harder), paying less attention to service levels and auditing standards, taking shortcuts with professional duties and ethics, and not investing in training and continuous professional development, would increase short-term productivity but at the cost of audit quality.

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